**UNITED STATES DISTRICT COURT**
**WESTERN DISTRICT OF PENNSYLVANIA**

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| INDECK KEYSTONE ENERGY LLC, | ) | |
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| Plaintiff, | ) | |
| | ) | |
| v. | ) | Civil Action No. 04-325 Erie |
| | ) | |
| VICTORY ENERGY OPERATIONS LLC, | ) | Judge Sean J. McLaughlin |
| | ) | |
| | ) | |
| Defendant | ) | |
| | ) | |
| | ) | JURY TRIAL DEMANDED |
| | ) | |

# EXPERT REPORT OF PAUL F. MILLER

I have been retained as an expert in this case by counsel for Victory Energy Operations, LLC ("VEO"). The following report contains my opinions regarding the dispute over the license agreement between VEO and Indeck Keystone Energy LLC ("IKE"), IKE's claims relating to trade secrets of the Keystone® boiler, the design of the Keystone® boiler, and the design of the Voyager® boiler. I understand that VEO continues to develop its complete Voyager® boiler line and will supplement the information provided to me. Therefore, my analysis is ongoing.

To the extent new information becomes available, that new information will be reviewed to determine whether it may have an impact on my conclusions and opinions set forth in this report. If necessary, I will update my report to reflect that new information. I reserve the right to offer rebuttal testimony to any evidence or argument advanced by IKE. Attached to this report is a list of the documents I reviewed and am relying upon that support my opinions, and on which I may base exhibits to be used at trial.

## PROFESSIONAL AND EDUCATIONAL BACKGROUND

Paul F. Miller, PE is an independent consultant and the Principal Member of Global Management Consulting, LLC. Mr. Miller established his consulting practice in 1998.

Mr. Miller has been engaged as an independent consultant by a wide variety of clients involved in the field of Power Generation, including several projects with a major Combustion Turbine supplier, boiler suppliers, boiler auxiliary equipment providers, power plant developers and architect/engineering firms. He has performed multiple consulting assignments pertaining to the technical review and evaluation of boilers as well as investigation of technical disputes regarding boilers and related equipment.

Prior to establishing his independent consulting business, Mr. Miller was employed by ABB Combustion Engineering, recognized as one of the world's leading suppliers of steam generating equipment and technology, for more than 25 years. He has extensive experience with Industrial Packaged Boilers, Industrial and Utility Power Boilers and Heat Recovery Steam Generators. As both an Engineer and Senior Level Manager, he has been responsible for the development, review and approval of multiple boiler designs, technologies and resolution of related technical and commercial issues.

As a Vice President and General Manager at ABB Combustion Engineering, Mr. Miller was directly responsible for the operations of both the Industrial Package Boiler and Heat Recovery Steam Generation businesses. This responsibility included direct and intimate involvement directing and managing Engineering, Technology Development and Licensing for the respective products. Mr. Miller is an experienced negotiator involved with and responsible for the drafting, negotiation and implementation of multiple license agreements, as well as other major project contracts and supply agreements.

Mr. Miller is the inventor of patented boiler technology and the author of a published technical paper pertaining to boiler design and technology. The article was T. P. Mastronarde and P. F. Miller, Technical Paper TIS 8564, Heat Recover Steam Generators Design Considerations Addressing Utility Combined Cycle Needs.

Mr. Miller holds a Bachelor of Science degree in Mechanical Engineering from Worcester Polytechnic Institute, Worcester, Massachusetts, USA and is a registered, licensed Professional Engineer in the State of Connecticut, USA. Mr. Miller has been recognized within the boiler industry by his election and serving as the Vice-Chairman of Heat Recovery Steam Generator product committee of the American Boiler Manufactures Association.

**Compensation**

Mr. Miller is being compensated on an hourly basis for the work he performs. His current rate is $225 per hour, plus expenses. Mr. Miller's compensation does not depend in any way on the outcome of this litigation.

**Prior Case Testimony**

*Stone & Webster, Inc. v. Cordova Energy Company, LLC*, American Arbitration Association, Matter No. 58Y 198 00146 02, Des Moines, Iowa

*Mitsubishi Power Systems, Inc. vs. The Shaw Group, Inc.*, American Arbitration Association, Matter No. 16 Y 110 00137 04, Atlanta, GA.

## SUMMARY OF CONCLUSIONS

### A. The License Agreement Granted VEO The Right To Manufacture And Sell Membrane Wall O-Style Boilers.

I have been involved in the licensing of steam generation equipment, and have negotiated several such licenses. I was involved in the decision to license my company's technology in order to create a revenue stream and to expand my company's access to the marketplace. In my experience, parties to a license agreement in my industry will often structure the parameters of the agreement to allow for flexibility between the parties and give the licensee the best opportunity to be successful in marketing and selling the licensed products to the benefit of both parties.

The license agreement between VEO and Erie Power Technologies, Inc. ("EPTI") granted VEO a license to design, market, manufacture and sell natural circulation, industrial watertube steam generators with a steam capacity range of between 29,000 and 150,000 pounds per hour of steam, including but not limited to the items set forth in Annex I. Annex I identifies the term "Products" as "Erie Power Technologies 'M' Series Keystone Boiler line, including models 8M, 9M … [up to model] 22M." The annex then sets forth a set of design parameters and drawings which simply define the basis for the thermal performance as incorporated in the agreement. It is standard in the boiler industry to describe a product line of steam generators with a table that shows expected output when a set of design parameters are followed. The information and parameters set forth in Annex I are included for the specific defined purpose of providing the basis for the thermal performance.

Nothing in the license agreement or any of the annexes or addenda precludes VEO from including membrane walls, also known as welded walls, in its boilers sold under the license agreement. Where a party to a license agreement in the boiler industry wishes to provide

an exact specification as to what is not part of the licensed technology, it is incumbent upon the licensor to spell out in the agreement the item or method of manufacturing that the licensee is precluded from using. Here, the license agreement makes no mention of membrane walls as an item excluded under the agreement, or otherwise places any limitation on VEO's rights or abilities to use membrane walls.

A license agreement requires the licensor to provide the necessary design information, drawings and other technical data that would allow a licensee to sell, design and manufacture licensed equipment or products. This technical information would normally include available options, features and improvements relating to the products which licensee can then incorporate without restriction. The specific provisions of the license agreement (Clauses 1.b, 2, 3 and 4, and Annex II) are consistent with this typical expectation. EPTI did in fact provide to VEO technical and design information pertaining to membrane, welded wall construction.

Clause 13, relating to improvements, required that EPTI provide VEO with any commercially available improvements in its possession relating to the licensed products. Membrane walls were a commercially available improvement over tangent tube boilers that had been incorporated by EPTI and applied to the "M" series product well before the license became effective. As such, even if it were the original intent of the parties here to license only tangent tube boilers to VEO, Clause 13 would mandate that EPTI provide VEO with the opportunity to use membrane walls.

Annex II of the License Agreement states that the licensor will provide licensee with all technical information, marketing and sales materials relating to the Products. Materials provided to me and represented to me as the materials provided to VEO by EPTI in the first two months of the license period show that VEO was given drawings, a sales brochure, a power point

presentation, and related documents. Consistent with this, the licensor provided to VEO the drawings, sales manual and sales documents to allow VEO to market and sell membrane wall boilers. If membrane wall boilers were not part of what VEO was licensed to sell, there was no reason for EPTI to provide VEO with that information.

Commercial reality also supports the conclusion that EPTI intended to include membrane walls as part of the technology licensed to VEO. It would be unreasonable for anyone knowledgeable about the boiler industry to expect a company to be successful in marketing or selling boilers in 2003 or afterwards that were all tangent tube in design. Membrane wall boilers have been the standard in the boiler industry since the mid to late 1980s. The great majority of customer specifications generated over the past several years for water tube boilers specifically identify membrane walls as a requirement. Further, it is recognized that tangent tube boiler construction would not satisfactorily or cost-effectively address the requirement to achieve emission levels set by governing authorities. In fact, the marketing information supplied by EPTI at the outset of the license period relating to the licensed product specifically references membrane wall construction as a desired feature. Therefore, it would be unrealistic to expect a licensee to successfully market and sell watertube boilers with only tangent tube walls in North America from 2003-2006. If the license were limited to allowing VEO use of only tangent tube construction, it would have made the product commercially unviable and negated the value and benefit of the license.

**B. VEO Had No Obligation To Use The Keystone Mark On The Boilers.**

I was provided with copies of several depositions, including the deposition of IKE's corporate representative, Chris Petcos. In his deposition, Mr. Petcos stated that VEO had failed to abide by clause 15a) of the license agreement by failing to attach a plate with the Keystone mark on each boiler it sold. Contrary to Mr. Petcos' claim, VEO had no obligation to

include a plate on the boilers that included the use of the Keystone trademark. Rather, the agreement provides that if VEO were to include on the product a reference to the fact that the product was manufactured and sold under license from EPTI, VEO would be required to include the Keystone mark. EPTI acknowledged the conditional nature of the obligation when Mr. Gdaniec modified the language in the March 2004 draft purchase agreement. Moreover, in my experience, it is neither custom nor practice in the industry to require a licensee to refer to the existence of a license in conjunction with the marketing or sale of licensed products. Accordingly, IKE has no basis to claim that VEO failed to satisfy

**C. IKE Has Identified No Information Or Technology That It Has A Legitimate Basis To Claim As Unique Or Proprietary.**

As a management level employee in the boiler industry, I am aware of only three ways to protect a company's technology: patents, copyrights and trade secrets. To my knowledge, IKE has identified no patents applicable to the Keystone boiler, and no infringements by VEO of any patents or copyrights. As a manager in the package boiler industry, I recognized that the design features of a watertube package boiler are well-known in the industry and that my company would not be able to prevent competitors from utilizing similar designs in their competing products. Watertube package boilers are very well-established products in the steam generation field. The thermodynamics of a watertube package boiler are very straightforward and simple as compared to other, more advanced systems. Accordingly, it would be very difficult to obtain a valid patent on a design feature of an O style watertube package boiler, or to incorporate design features which were not known or readily available to the competition.

Mr. Petcos identified a lengthy list of items IKE asserts are trade secrets EPTI provided to VEO under the license agreement. IKE has made sweeping statements regarding

what it believes to be misappropriation of trade secrets by VEO, without identifying any information that is actually unique or proprietary to IKE. Information can only be considered a trade secret where its holder has maintained the information as confidential. In my role in management in the boiler industry, I was responsible for protecting my company's confidential trade secrets. In that capacity, I recognized that my company could only claim information was a trade secret where that information was not generally known or readily accessible by the company's competition or the public.

VEO and EPTI recognized that information cannot be considered confidential where the information is already available within the public domain, as reflected in the license agreement itself, wherein they excluded publicly available information from the definition of "Licensor Confidential Information." A piece of information, such as a design feature, may be confidential and only known to the company's employees, but once the product that incorporates that design feature is advertised, marketed, or sold, the feature becomes generally known and accessible to the public.

**D. The Information Provided To VEO Is Available In The Public Domain And Accessible To IKE's Competitors.**

Based on my knowledge and experience in the boiler industry, Mr. Petcos has failed to identify any information that could be described as unique to the Keystone boiler, or inaccessible to IKE's competitors. In fact, many of the items he identified are commonly known concepts in the industry. For instance, Mr. Petcos identified the "welded wall design" as a trade secret provided to VEO. I am aware of several boiler manufacturers that have incorporated a welded wall design in their watertube package boilers, including CE, Nebraska Boiler, Babcock & Wilcox, Rentech and CERREY, to name a few. Similarly, the configuration of tube layouts and the concept of the O boiler are well-known in the boiler industry. Mr. Petcos also identified

"steam saturation temperatures" as a trade secret. Steam saturation temperatures are a published scientific fact known in basic thermodynamics, and certainly not something a company could claim as proprietary.

IKE also identified steam separation equipment as a trade secret that VEO misappropriated. However, steam separation equipment is a standard part of every watertube, drum type boiler. While it is true that the specific design of a given drum internal may vary from one manufacturer to the next, the concepts of baffles, dry pans, vortexes, chevrons and demisters are well known and utilized throughout the industry. It would be impossible for IKE to demonstrate that its steam separation equipment could be deemed a trade secret, given the fact that many other manufacturers offer equipment with the same features.

Moreover, VEO could not have misappropriated the steam separation equipment designs from EPTI or IKE because neither EPTI nor IKE provided VEO with steam separation equipment designs, despite a clear obligation under the license agreement to do so. Moreover, IKE refused to even sell VEO any steam separation after it became licensor.

**E. The Design Of VEO's Voyager Boiler In No Way Copies Or Misappropriates Any Proprietary Design Or Technology From The Keystone Boiler.**

I was provided with drawings and design information relating to both the Keystone and the Voyager boiler, and in my opinion, the only similarities between the Keystone and Voyager boiler are those that are readily available in the public domain. For instance, both boilers are O style watertube package boilers, as are the O style boilers sold by Nebraska and others. In addition, both boilers have two drums, a lower mud drum and the upper, steam drum, as is also true with all other O style watertube package boilers.

The similarities between the boilers are driven in large part by outside forces. For instance, the width and height of the boilers may appear similar in certain models. However, the

height and width of a boiler is often limited by shipping constraints. The dimensions of a boiler are also dictated by the burner manufacturer's requirements. In addition, while both the Keystone and Voyager have 2 inch tubes, the same is true of virtually every watertube package boiler, because that is the size that is more commercially available and cost effective to use. Likewise, tube thicknesses are defined by ASME code, and third party manufacturing capabilities.

The Keystone and Voyager also have many fundamental differences in their design. For instance, the Voyager is designed on a fixed frame that is fastened to the foundation, and the pressure parts of the boiler are designed to expand thermally along the base. By contrast, the Keystone boiler is designed to expand thermally through the base, and along the foundation. The layout of the furnace tubes is distinctly different between the boilers as well. The Keystone furnace tubes are on a three inch center and enter the drum in a staggered arrangement, whereas the Voyager furnace tubes are on a 4 inch center and enter the drum in line without offsetting of the tubes. The layout of the boiler bank convective tubes are also different between the boilers. In addition, there is a critical difference in the design of the sootblowers between the two boilers. These are just a few examples of many differences between the designs.

**Conclusion**

The foregoing opinions are based on my knowledge and experience in the boiler industry, as well as the materials I have reviewed from this litigation. It is my belief and understanding that the parties intended to include welded or membrane wall construction as a feature of the products VEO was authorized to market, sell, design and build. It is also my opinion that IKE has failed to identify any information or technology that could reasonably be considered either proprietary or unique to the Keystone boiler. Finally, it is my opinion that the

design of VEO's Voyager boiler does not utilize any information or designs that are unique or proprietary to the design of the Keystone boiler.

Respectfully submitted:

Paul F. Miller, P.E.
Member – Global Management Consulting, LLC
September 11, 2006

# List of Items Reviewed and Relied Upon by Paul F. Miller

| | | |
|---|---|---|
| CD No. 1: | Docs VEO 8822-9697 | |
| | Transcripts: | Bernatowicz |
| | | Petcos (11/05 and 2/15/2006) |
| | | VEO 30(b)(6) (Mark White) |
| | | Fuhrman |
| CD No. 2: | Docs VEO | 5849-5971 |
| | | 8123-8205 |
| | IKE | 254-272 |
| | | 949-955 |
| | | 1277-1280 |
| | | 1341-1344 |
| | Transcripts: | Mark White |
| | | Gdaniec |
| | | McConaughy |
| | Attachments: | Statement |
| | | Appendix G |
| | | Appendix H |
| | | Memo |
| | | Appendix A thru F |
| | | IKE's Statement of Facts |
| | | IKE's Brief in Support of Partial SJ |
| | | VEO's Response to IKE's Facts |
| | | VEO's Reply |
| 8/16/06: | Documents: | V00136 |
| | | V 00285 – V00312 |
| | | IKE 01106 – IKE 01113 |
| | | IKE 01658 |
| | | IKE 05465 |
| | | VEO 04827 – VEO 04828 |
| | Drawings: | VEO 09459 – VEO 09505 |
| | | VEO 08184 – VEO 08190 |
| | | VEO 09338 – VEO 09395 |
| | Exhibits: | McConaughy Dep 2/16/06 – Exhs 1-18 |
| | | M. White 30(b)(6) Dep 2/1/06 – Exhs 6-25 |
| | | M. White Dep 10/14/05 – Exhs 1-43 |
| 8/17/06: | Exhibits: | Robert Gdaniec 11/8/05 – Exhs 1-40 |
| 8/22/06: | Exhibits: | IKE 30(b)(6) 2/15/06 - Exhs 1-15 |
| 8/28/06: | Drawings: | VEO 13815 – VEO 13866 |
| 8/30/06: | Docs: | VEO 14438 – VEO 14646 |
| 9/5-6/06 | Conversations with Mark White, Carl Logan and Trent Miller | |